THE REALLY BIG THREATS:
What They Are; Where They Come From; What We Must Do

Prepared by Dr. Lowell Wood (University of California Lawrence Livermore National Laboratory, Livermore CA 94551-0808, and Hoover Institution on War, Revolution and Peace, Stanford University, Stanford CA 94305-6010; (925) 422-7286 [voice]; (925) 423-1243 [fax]; lowellwood@attbi.com, for invited presentation to the 2002 Annual Meeting of the Doctors for Disaster Preparedness, 27-28 July 2002, Colorado Springs, CO.

Opinions expressed herein are those of the author or only.
THE REALLY BIG THREATS I.

“One death is a tragedy, ten deaths is a disaster, ten thousand deaths is merely a statistic.”

– Joseph Stalin

- What ‘Stalin statistics’-level threats should Americans currently worry about – if any?
  - Every major crime engenders terror at some level
    - Distinguish between deca-death “police work” and kilo-death “acts of the common enemy” that aren’t conventional warfare
    - Features of stealth, shock, non-repetitiveness
  - Problems far worse than the “9/11” type
  - Mega-death scales, not kilo-death ones
    - Trillions of dollars of economic impact, not billions
    - Staggering blows to American civilization
      - E.g., like Al Qaeda repeatedly threatens to deliver
THE **REALLY BIG THREATS II.**

- Three distinct flavors
  - **Wholesale physical destruction**
    - **Means:** Explosives; stored U.S. mass/energy used
    - **Presentation:** Blunt-object trauma; lacerations; burns; exposure; opportunistic disease
  - **Infectious, high-lethality disease**
    - **Means:** Aerosol initiation; coughing/sneezing
    - **Presentation:** Abrupt, super-high incidence of ‘exotic’ disease; high morbidity/mortality; only ‘weak’ treatments available
  - **Critical infrastructure destruction**
    - **Means:** Various
    - **Presentation:** {Lights out, natural gas & water don’t flow from taps; grocery stores empty; banks closed; bridges gone; rivers flood; …TV and Internet down}: exposure, malnutrition, despair,..
THE REALLY BIG THREATS III.

- Where do they come from?
  - Terrorist cells with 0.3 - 2 dozen people
    - Now unusually difficult to penetrate—high ideological and cultural ‘shields’
  - Per-attack resource envelopes of $1 M
  - Typical effort-durations of 3 years
  - Featuring:
    - Perceptive analyses of vulnerabilities, chinks-in-armor, (transient) strike-opportunities
      - Potent leveraging of available-in-the-U.S. assets
        - E.g., big, easily-accessed stored energy pools; readily purchased/commandeered assets; entry-visas; wall-to-wall civil liberties;…
    - Intelligent, often-meticulous planning
      - Including extensive, realistic rehearsals-&-drills
    - Adequate material resources
      - But not so much as to encourage stupidity, waste
      - Mostly wire-transferred in from abroad
    - Some key personnel willing to die
      - “Exceptionally-intelligent robots/autopilots”
THE REALLY BIG THREATS IV.

- What do you do about them?
  - No ‘magic’ solutions
    - This isn’t an easy problem
  - Present-day transnational terrorism is an engineered pathogen directed against the vital organs of modern civilization
    - Intelligently designed to destroy Western civil societies...
      - “Read his lips!” This is what OBL & Co. have said, repeatedly, plainly, unabashedly, unmistakably – yea, proudly- &- defiantly
  - ...by the failed-albeit-intelligent ‘students’ of what it takes to have a modern culture and to live in a Third Millennium society
    - The radical-fundamentalist, modern-rejectionist, medieval Islamists, bent on “restoring the Caliphate from Morocco to Indonesia”
THE REALLY BIG THREATS V.

• What do you do about them? cont’d.
  – **Maximum** pressure applied at *every* accessible point of the ‘infection’
    • Close down the “wellsprings of lethal hatred,” wherever they may be found
      – Radical madrassas uniformly shuttered
        • Religiously-disguised child abuse
        • No more corruption-&-intellectual crippling of the defenseless young!
      – Hatemongering clerics ousted by mosques
        • Key ‘hate speech’ banned by local law
        • E.g., overt incitement to murder *anyone*
      – Terrorism-oriented encampments closed, *swiftly* and *definitively* – *everywhere*
    – “If you think peace is expensive, try *throwing a war sometime.*” – H. Kissinger
THE *REALLY BIG THREATS V.*

- What do you do about them? cont’d.
  - **Maximum** pressure applied at **every** accessible point of the ‘infection’ cont’d.
    - Kick out/keep out the pathogenic Bad Actors
      - No non-citizen has a *right* to be here
        - Only *model citizens* of their own countries should get entry visas – the *presumption* of good intentions must be suspended, forthwith
      - Establish clear ‘rules of the road’ for non-citizens, over-&-above the criminal code, & *enforce* them
        - “If you step over the ‘bright lines,’ out you go immediately – & you don’t *ever* come back!”
      - Modern technology, *intelligently applied*, can do a far better job than has been – or is being – done
        - Citizen-voters *must* demand excellence from the government on this entire score
        - Thus far, it’s “Keystone Kops” performance
THE *REALLY* BIG THREATS VI.

• What do you do about them? cont’d.
  – Maximum pressure applied at every accessible point of the ‘infection’ cont’d.
    • Suppress pathogenic behaviors
      – Raise (non-obvious) ‘shields’ at vulnerable assets
        • Deny all ‘cheap shot’ opportunities
      – Emplace fields-of-tripwires at prized capabilities
        • Multiple, layered, ‘invisible’ hazards posed to Bad Guys
    – Enforce “Loose lips sink ships!” discipline, so that each-&-every defensive means is exercise-durable
      – *Compellingly* incentivize turn-around behaviors by potentially-reformable Bad Guys
        • “Your and your family’s lives will be *utterly transformed* forever by your moral decision.”
    • By *fully* leveraging our enormous economic, technological and cultural strengths
      – *Not* by Soviet-style Government “Five-Year Plans”
THE REALLY BIG THREATS VII.

What do you do about them? cont’d.

– Maximum pressure applied at every accessible point of the ‘infection’ cont’d.
  • Deny success to the pathogenic attacks
  • Minimize losses sustained during any-and-all attacks
    – Intelligence-amp;-imagination in preparation
      • The enormous, traditional advantages of the defense
    – Discipline-amp;-steadfastness in execution
      • The everlasting key to success-in-war
  • Attribute-amp;-retaliate disproportionately
    – “You say you-and-yours love death the way we love life? Wow, do we have a deal for you!”
    – Pursuit of the guilty is intense, lavishly resourced, knows no geo-bounds – and goes on forever
THE *REALLY* BIG THREATS VIII.

- What do you do about them? cont’d.
  - Mass physical destruction
    - *Future* Government ‘trip-wires’ must reliably spot weaponry-in-transit toward targets
    - Government weaponry-negation ways-&-means need lots of improvement, also
    - None of this isn’t Buck Rogers stuff – but it is high-tech, and it does demand competence
    - Citizenry should demand emplacement, ‘live fire’ testing, independent review & periodic upgrading of all civil-defensive systems
    - If you don’t see it happening, and people you trust don’t tell you it’s happening, be assured that it *really isn’t* happening
      - There’s no practical limit to the time-&-money that can be expended by large bureaucracies without any worthwhile results being obtained
THE REALLY BIG THREATS IX.

- What do you do about them? cont’d.
  – Large-scale biological attacks
    - *Future* Government trip-wires must detect attacks *underway*, at earliest-possible times
      – The *only* way to reliably reduce mass-casualties
      – Citizenry should demand emplacement, ‘*live fire*’ testing, independent review & periodic upgrading
    - Government must develop-&-stockpile ways-&-means of mass-rescue of attacked citizenry of *already-proven* efficacy
      – Citizenry must demand independent, periodic assessments of adequacy, e.g., timeliness
      – Present-time “smallpox affair” may end up the poster-child for “How *not* to do bio-defense”
        - Unprecedently dense, mobile population, with many “young, old, sick and hurt” members – and essentially all of them “smallpox-naïve”
        - Vaccination-under-attack plays “You bet your country” with an entirely untested scheme – *and* can’t rescue most of the already-attacked
THE **REALLY BIG THREATS** X.

- What do you do about them? cont’d.
  - Critical infrastructure lossage
    - Government must stockpile key items for swift recovery and lossage-minimization; conduct realistic rehearsals for post-attack reconstitution
      - Citizen-group oversight and citizenry participation is essential – otherwise, it’s bureaucratics-as-usual
      - Supported by realistic analysis and modeling, to spot-&-assess key vulnerabilities – and prescribe ‘fixes’
      - “Red Teams” everywhere – the implacable enemy of the dissembling bureaucrat, as well as watchdog for the interests of the citizenry
    - Civil Defense analog of a Grand Jury
TWO EXAMPLES I.

- Crucial infrastructure attack
  - ElectroMagnetic Pulse (EMP)
  - Generated by nuclear explosions at high altitude (100-1000 km)
    - “If you can see the nuclear burst above your horizon, its EMP can see you-&-yours”
  - Combination of lightning and static electricity, re impacts on electrical-&-electronic equipments of all types
  - Single burst disables all of vulnerable equipment, across all of U.S.??
  - Suppress with effective missile defenses – keep warheads from entering ‘U.S. space’
  - Reconstitute-after-attack with lots of stored spare parts – and people who know how to install them and revive systems
TWO EXAMPLES II.

- Biological attack – (neo-)smallpox
  - Virus-loaded *micro*drops dispensed from aerosolizing containers: e.g., big airports
    - E.g., ~1 million people infected in 2 weeks’ undetected attack at Chicago O’Hare
    - Deep pulmonary infections vs. classic upper respiratory ones – “terrorist-type smallpox”
      - Brief acute phase, near-100% mortality?
      - Gene-grafted, for swift, 100% lethality?
  - Voluntary mass vaccination-in-advance suppresses rate-of-infections under attack
    - Undergirded by advanced antivirals and VIG
  - Attack-alert by *in situ* real-time detectors
    - Support swift airport quarantine; interception -&- vaccination of airborne infectees
  - Advanced antiviral rescue of clinical cases
  - Zero deaths; no National hyper-epidemic
TWO EXAMPLES III.

- But we have **no** ballistic missile defenses
  - In spite of superb leadership and excellent policy actions by President, SecDef – e.g., ABM Treaty-scrapping
  - And the National program has a by-now well-rehearsed “Don’t know what, don’t know when” theme-song
    - “Hand-me-down” designs/programs/people from folks who didn’t like missile defense – but which are now fully funded!
    - Amazing slow-roll still going on by Pentagon bureaucracy

- And we have **no** program for erecting robust defenses against bio-attacks
  - Although billions have been appropriated to this end
  - E.g., $625 M spent on a crash program to buy 320 M doses of DryVax – and the Government *still* can’t figure out *what* to do with it, let alone *when, how – or why*
  - And a smallpox attack on the U.S. can’t be *detected* – into the foreseeable future – until pocks erupt on victims – though the entire world envies American bio-tech
  - And human testing-&-stockpiling of breakthrough-quality pan-*Orthopoxviridae* antivirals is *still* ‘on hold’
There’s no substitute for preparedness – Thoughtful preparedness by a nation as rich-&-powerful-&-technically advanced as the U.S. virtually guarantees desirable outcomes
  • Neo-barbarians with 12th Century worldviews are doomed to lose each-&-every time they confront us
  • But the lack of it can lead to outcomes of nearly unimaginable wretchedness
    • Pervasive unpreparedness well-characterizes our present condition – and our near-term outlook – relative to several classes of neo-barbarian threats
    • A new Cabinet agency isn’t going to fix this at all – in-&-of itself: re-arranging the Titanic’s deck-chairs
    • Lots of sustained effort by thoughtful, dedicated citizens, unshackled by standard bureaucrats, will be necessary – and may be sufficient

I offer you the choice of life or death, blessing or curse. Choose life and then you and your descendents will live. — Deuteronomy 30:19